Amendment To the Claims:

1. (Canceled)

2. (Currently Amended) The system of claim ~~1~~ 3, wherein the liquid supply valve and the drain valve are controllable by actuation in response to electronic signals from the controller.

3. (Currently Amended) The system for measuring flow rate of a liquid, comprising: ~~of claim 1,~~

a collection vessel coupled to a supply valve and to a drain valve;

a weir providing a passage for the liquid into the collection vessel, wherein the liquid travels from the bottom to the top of the weir and overflows into the collection vessel;

a load cell coupled to the collection vessel and generating a load cell signal indicating the mass of the collection vessel with the collected liquid;

a controller for converting the load cell signal to indicate the liquid flow rate into the collection vessel; and

~~further comprising~~ a gas valve coupled to the collection vessel, wherein the controller sends an electronic signal to actuate the gas valve to vent the collection vessel or supply a non-reactive gas to the collection vessel.

4. (Currently Amended) The system of claim ~~1~~ 3, further comprising a gas pressure sensor generating ~~an~~ electronic signal indicating the gas pressure of the collection vessel to the controller.

5. (Original) The system of claim 3, wherein the change in the non-reactive gas pressure generates a change in the liquid flow rate into the collection vessel in response to electronic signals from the controller.

6. (Canceled)

7. (Currently Amended) A system for measuring flow rate of a liquid, comprising:

a collection vessel coupled to a supply valve and to a drain valve;

a weir providing a passage for the liquid into the collection vessel, wherein the liquid travels from the bottom to the top of the weir and overflows into the collection vessel;

a load cell coupled to the collection vessel and generating a load cell signal indicating the mass of the collection vessel with the collected liquid; and

a controller for converting the load cell signal to indicate the liquid flow rate into the collection vessel;

wherein the weir includes a column or tube wherein the top of the weir is above the bottom of the collection vessel; and

~~The system of claim 6,~~ wherein the liquid is pumped from the bottom of the weir at a constant pressure producing a gradual overflow at the top of the weir into the collection vessel by gravity without formation of mist or droplets.

8. (Currently Amended) The system of claim ~~1~~ 3, wherein the load cell signal is either an electronic analog signal or a digital signal.

9. (Currently Amended) The system of claim ~~1~~ 3, wherein the controller samples the load cell signal after a stabilization period and converts the load cell signals to indicate liquid flow rate into the collection vessel.

10. (Currently Amended) The system of claim ~~1~~ 3, wherein the controller generates feedback error signals by comparing the liquid flow rate into the collection vessel with a liquid flow rate desired, wherein the feedback error signals actuate the gas valve, the supply valve and/or the drain valve until the feedback error signal is within a predetermined error margin and the liquid flow rate is within a predetermined range of the liquid flow rate desired.

11. (Canceled)

12. (Canceled)

13. (Currently Amended) A method of measuring the flow rate of a liquid, comprising:

providing a weir for a passage into a collection vessel;

supplying liquid to the weir so the liquid overflows the weir and collects in the collection vessel;

generating a load cell signal indicating the mass of the collection vessel with the liquid collected;

converting the load cell signal to indicate the flow rate of the liquid into the collection vessel;

providing a liquid supply valve and a drain valve controllable by actuation in response to electronic signals from a controller; and

~~The method of claim 11, further comprising~~ sending an electronic signal from the controller to actuate a gas valve to vent the collection vessel or supply a non-reactive gas to the collection vessel.

14. (Currently Amended) The method of claim ~~11~~ 13, further comprising generating an electronic signal indicating the gas pressure of the collection vessel to the controller.

15. (Original) The method of claim 13, further comprising changing the non-reactive gas pressure to vary the liquid flow rate into the collection vessel.

16. (Currently Amended) A method of measuring the flow rate of a liquid, comprising:

providing a weir for a passage into a collection vessel;

supplying liquid to the weir so the liquid overflows the weir and collects in the collection vessel;

generating a load cell signal indicating the mass of the collection vessel with the liquid collected;

converting the load cell signal to indicate the flow rate of the liquid into the collection vessel; and

~~The method of claim 11, further comprising~~ supplying the liquid from the bottom of the weir at a constant pressure producing an overflow at the top of the weir into the collection vessel by gravity without formation of mist or droplets.

17. (Currently Amended) The method of claim ~~11~~ 13, further comprising sampling the load cell signal after a stabilization period and converting the load cell signals to indicate liquid flow rate into the collection vessel.

18. (Currently Amended) A method of measuring the flow rate of a liquid, comprising:

providing a weir for a passage into a collection vessel;

supplying liquid to the weir so the liquid overflows the weir and collects in the collection vessel;

generating a load cell signal indicating the mass of the collection vessel with the liquid collected;

converting the load cell signal to indicate the flow rate of the liquid into the collection vessel; and

~~The method of claim 11, further comprising~~ generating feedback error signals by comparing the liquid flow rate into the collection vessel with a liquid flow rate desired, wherein the feedback error signals actuate a gas valve, a supply valve and/or a drain valve until the feedback error signal is within a predetermined error margin and the liquid flow rate is within a predetermined range of the liquid flow rate desired.